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**Question 1: Is this free or paid?**

**Answer:** The service is paid. LSWI and NDVI are complementary services, but other features incur charges.

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**Question 2: What are the charges?**

**Answer:** The charges are 750 INR per acre per season, with one season being less than or equal to 6 months.

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**Question 3: How are we measuring soil moisture?**

**Answer:** Soil moisture is measured at the surface level (a few cm/inches) using satellite data from microwave wavelengths, specifically active radar (SAR). Root zone soil moisture is not part of Sat2Farm but can be provided upon request for an additional charge. If the soil has a thin layer of leaves or other material, soil moisture measurement is not impacted.

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**Question 4: How accurate is soil moisture data?**

**Answer:** Soil moisture data has about 80% accuracy, tested in India, Australia, New Zealand, France, and England. International research articles have been published on this topic. (Reference: Dr. Sat Kumar's Google Scholar profile:

<https://scholar.google.com/citations?user=L7RCILcAAAAJ&hl=en&oi=ao>)

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**Question 5: What is the source of weather data?**

**Answer:** Weather data is provided by a third party (Visual Crossing).

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**Question 6: What is the accuracy of weather data?**

**Answer:** Weather data is approximately 80% accurate, with over 80% accuracy for the next 3 days. Predicting rainfall during the monsoon season in India is challenging due to rapidly moving clouds.

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**Question 7: Is it possible to do soil health analysis using satellites?**

**Answer:** Yes, soil health analysis is performed using satellite data and past soil testing, providing information on N, P, K, soil organic carbon, and pH value. A patent has been filed for this algorithm. The model has been tested across India with an accuracy of 85-90%, though accuracy may vary due to factors like farming practices and climatic conditions. Validation is based on 20,000 samples across India, with 60% used for validation and 40% for training the model.

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**Question 8: Can a person without farming experience do farming by following your advisories?**

**Answer:** Yes, a person without farming experience can gain hands-on experience by following the app's guidelines, including the Crop Calendar for step-by-step advice from field preparation to harvest, along with fertilizer application, pest and disease forecasts, and irrigation scheduling.

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**Question 9: Can you suggest which crop to grow based on crops in the district?**

**Answer:** Currently, we do not provide crop suggestions due to market risks and unpredictable natural environmental conditions, as results may vary.

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**Question 10: Can soil moisture detection and NPK features be measured for a terrace garden using satellites?**

**Answer:** Soil moisture and NDVI require a minimum area of 30 m x 30 m (about a quarter of an acre) for NDVI and 60 m x 60 m for soil moisture, making it generally not feasible for terrace gardens. Crop health and soil moisture can be provided if the size requirement is met, but soil health analysis is not available.

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**Question 11: In how much time can we get the image advisory?**

**Answer:** Image-based advisories are provided within a maximum of one working day, typically taking 3-4 working hours to process.

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**Question 12: Is there an iPhone version of the app?**

**Answer:** Yes, an iPhone version of the Sat2Farm app is available.

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**Question 13: For which crops are pest and other advisories provided?**

**Answer:** Advisories are provided for over 100 crops in India and extended to other countries. For specific crop advisories, the team will prioritize them, with timeframes varying by crop type.

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**Question 14: What is the minimum area the app can measure?**

**Answer:** The minimum area for satellite-based data is a quarter of an acre (30 m x 30 m) at 10 m spatial resolution. Other information can be provided for any size.

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**Question 15: Are organic advisories provided for pest and disease attacks?**

**Answer:** Yes, clients can specify a preference for organic solutions by including a remark like "Organic" in the comment section when uploading an image, and the team will provide pest and disease management recommendations based on organic methods.

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**Question 16: Are services available for coffee and tea crops?**

**Answer:** Most services are available for coffee and tea, except satellite-based services if the crops are grown under shade where the canopy is not visible from above.

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**Question 17: Can farmers market or advertise their agricultural products through the app?**

**Answer:** Sat2Farm does not promote agricultural input company products, but an API can be offered for integration into their app.

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**Question 18: Can farmers contact or call for inquiries?**

**Answer:** Yes, farmers can call for inquiries. Language-specific contact details are provided in the Sat2Farm app.

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**Question 19: Do farmers receive calls from the technical team (agri experts)?**

**Answer:** Yes, the technical team may contact users for clarification, such as when an uploaded image for pest/disease advisory is unclear or more information is needed.

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**Question 20: Can NDVI data indicate pest and disease attacks?**

**Answer:** NDVI measures crop health through leaf greenness but does not directly detect pests or diseases. A decline in NDVI values can signal crop stress, prompting further investigation for pests or diseases. NDVI can also monitor the spread of pests/diseases and assess treatment effectiveness by comparing values over time.

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**Question 21: What factors affect soil moisture accuracy?**

**Answer:** Soil moisture accuracy depends on soil type, vegetation type, and irrigation methods.

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**Question 22: What factors affect irrigation advisory accuracy?**

**Answer:** Irrigation advisory accuracy depends on crop type, crop stage, crop coefficient, potential evapotranspiration (ET), amount of irrigation (in mm), and frequency.

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**Question 23: What factors affect weather forecast accuracy?**

**Answer:** Weather forecast accuracy varies based on the density of ground-based weather stations. Regions with denser networks have better accuracy than those with fewer stations.

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**Question 24: Can data be provided for thick plantations like banana, mango, and coconut?**

**Answer:** Weather forecasts, crop health, and pest/disease advisories are available for thick plantations like banana, mango, and coconut. However, soil health analysis and soil moisture accuracy may be relatively low for these crops.

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**Question 25: Can farmers get data on crops grown in nearby areas for market prediction analysis?**

**Answer:** Currently, we do not provide information on crops grown in nearby areas for market prediction due to market risks and unpredictable environmental conditions, as results may vary.

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**Question 26: Can services be provided for Integrated Farming Systems (IFS)?**

**Answer:** Please contact 8970700045 or 7019992797 for further information.

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**Question 27: How often does soil moisture get updated on the app?**

**Answer:** Soil moisture is updated once every 12 days.

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**Question 28: What happens when there is cloud cover? Do you still provide advice for soil moisture and NDVI?**

**Answer:** Soil moisture, derived from microwave data, is unaffected by cloud cover and is available every 12 days. NDVI, obtained from optical data, is not accessible during cloud cover.

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**Question 29: What is the technology behind irrigation scheduling?**

**Answer:** Irrigation scheduling is based on two methods:

1. **Satellite SM-based method:** Computes irrigation requirements using satellite soil moisture data compared to the maximum allowable deficit, depending on crop type and stage.
  2. **ET-based method:** Uses weather forecast data to compute potential evapotranspiration (PET) and determines irrigation water requirements based on crop and stage. The ET-based method is primarily used due to the 12-day satellite pass interval for soil moisture.
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**Question 30: What is the feedback from farmers on crop profiles for cotton, soybean, maize, sugarcane, and chana?**

**Answer:** Farmers are satisfied with the Crop Calendar, with positive feedback received for chickpea from Adilabad and sugarcane from Uttar Pradesh.

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**Question 31: Is it possible to backfill geo-tagged data already existent in KML format on the app?**

**Answer:** Historical data is provided outside the app. Data from 2016 can be supplied upon request on a paid basis.

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**Question 32: What crops are available in the Sat2Farm app?**

**Answer:** Advisories are provided for over 100 crops in India and extended to other countries. For specific crop advisories, the team will prioritize them, with timeframes varying by crop type.

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**Question 33: Can data for land undulation and terrain be provided?**

**Answer:** Yes, land undulation and terrain data can be provided at 30 m spatial resolution using free and open-source Digital Elevation Model (DEM) data.

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**Question 34: What is the criterion for the maximum canopy height for soil moisture estimation?**

**Answer:** Soil moisture can be estimated for crops shorter than 5 feet. Above this height, uncertainty in soil moisture data increases.

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**Question 35: How can farmers access the application or web portal for a trial?**

**Answer:** The mobile application is available on the Play Store. For the web application, a trial can be provided upon request. A demo can be scheduled via Calendly on the website:

<https://satyukt.com/index.html>.

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**Question 36: What are the accuracy levels of weather data, NDVI, soil moisture, and soil nutrient analysis?**

**Answer:**

- **Soil Moisture:** ~80% accuracy, tested in India, Australia, New Zealand, France, and England. (Reference: Dr. Sat Kumar's Google Scholar profile: <https://scholar.google.com/citations?user=L7RCILcAAAAJ&hl=en&oi=ao>)
  - **Weather Data:** ~90% accuracy, with 98% accuracy for the next 3 days; less accurate for rainfall during India's monsoon season.
  - **Soil Nutrient Analysis:** ~85-90% accuracy, varying due to farming practices and climatic conditions.
  - **NDVI:** Accuracy varies (good, bad, or better) based on data quality and conditions.
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**Question 37: How does NDVI help crops like vegetables with a 5-day update interval?**

**Answer:** Despite the 5-day NDVI update interval, it provides actionable insights into vegetable crop health by measuring leaf greenness. Combined with weather forecasts, soil moisture, and irrigation data, it helps monitor crop health and enables early corrective measures to prevent stunted growth or poor yield.

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**Question 38: Is it possible to update the satellite base map in the application?**

**Answer:** The app uses Google's basemap, which updates automatically when Google updates it. It is used solely for location purposes.

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**Question 39: How well does the Sat2Farm app provide features for citrus crops covered with nets in South Africa?**

**Answer:** For citrus crops covered with light, transparent nets (e.g., for hail protection), most satellite-based features like crop health and soil health are reliable. Weather forecasts, pest/disease advisories, and crop calendars are unaffected by nets. However, soil moisture and soil health data may have some uncertainties due to net cover and tree canopy.

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**Question 40: Do you have data on carbon emissions of puddled rice fields versus drill-down rice fields?**

**Answer:** An algorithm has been developed to estimate carbon emissions from puddled rice fields and fields managed with alternate wetting and drying methods.

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**Question 41: How do farmers get carbon credits to their bank accounts?**

**Answer:** Sat2Farm specializes in estimating carbon emissions through the MRV (Monitoring, Reporting, Verification) process. Actual crediting and transfer of carbon credits to bank accounts are handled by organizations managing carbon credit programs. Farmers should register with such platforms for verification and monetization of credits.

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**Question 42: What is the SOP for registering for carbon credits under carbon sequestration?**

**Answer:** Farmers need to register with platforms managing carbon credit programs, where credits are issued and monetized after verification. Specific SOPs vary by organization, so farmers should consult the relevant platform for details.

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**Question 43: When does the Government of India plan to implement the carbon credit trading program?**

**Answer:** The Indian Carbon Market (ICM) is expected to launch soon, with a draft procedure issued by the Bureau of Energy Efficiency (BEE) in late 2023. The Ministry of Environment, Forest and Climate Change will oversee the program by setting annual GHG reduction targets.

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**Question 44: Are coffee planters eligible for crop insurance if they lose crops due to bad weather?**

**Answer:** Yes, coffee planters in India are eligible for crop insurance under schemes like the Pradhan Mantri Fasal Bima Yojana (PMFBY), which covers losses due to adverse weather for perennial crops like coffee. Sat2Farm works with insurance companies to provide Sat4risk reports.

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**Question 45: How can Satyukt Technology help farmers in distress?**

**Answer:** Sat2Farm provides forecasting and standard Package of Practices (POP) to support farmers in distress.

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**Question 46: Can I add different GPS points to geotag a larger farm area?**

**Answer:** Yes, a minimum of three coordinates is required to geotag a farm, and more can be added for larger farms. Once geotagged, coordinates cannot be modified in the app for that farm.

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**Question 47: Can a farm without a sown crop be added, and what option should be selected?**

**Answer:** Yes, a farm without a sown crop can be added using the “barren land” option. However, features like crop calendar, pest/disease forewarning, and crop-specific soil recommendations will not be available.

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**Question 48: Can French language integration be done?**

**Answer:** The app supports French, but advisories like pest/disease forewarning and crop calendar are available for only a few crops in French. Other international languages are also supported. For specific international crop advisories, consult the Operations team.

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**Question 49: Can disease examples include pictures?**

**Answer:** Yes, disease forewarning includes accompanying images for better understanding.

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**Question 50: Can some services be offered on a freemium basis?**

**Answer:** No, services are not offered on a freemium basis. However, complementary features like soil moisture and NDVI are available once services are unlocked after payment.

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**Question 51: Can I download a soil report?**

**Answer:** Yes, the app allows users to download soil reports in PDF format.

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**Question 52: Is the Android map more updated, and why can't we see landmark names?**

**Answer:** The app uses Google Earth maps, aligned with Google's updates and features. Satyukt cannot modify basemap features, including landmark names.

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**Question 53: Is every farm paid separately?**

**Answer:** Yes, each farm requires separate payment, charged on a per-acre, per-season basis.

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**Question 54: Can I access older data, like last year's data, to compare crop production volume?**

**Answer:** Older data (e.g., from the previous year) can be provided upon request for an additional cost, but it is not directly available through the app.

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**Question 55: Can I get real-time price trends of various crops?**

**Answer:** Currently, real-time crop price trends are not provided due to market risks and unpredictable environmental conditions, as results may vary.

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**Question 56: Can I get data on water requirements per acre for a specific crop to maintain good moisture?**

**Answer:** Yes, the app provides irrigation advice tailored to the specific crop and available moisture content to optimize crop growth.

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**Question 57: How accurate is the data in the report?**

**Answer:** Overall report accuracy is 88-92%. Specifically:

- **Soil Moisture:** ~80% accuracy, tested in India, Australia, New Zealand, France, and England.
- **Weather Data:** ~90% accuracy, with 98% for the next 3 days; less accurate for monsoon rainfall in India.

- **Soil Nutrient Analysis:** ~85-90% accuracy, varying by farming practices and climatic conditions.
  - **NDVI:** Accuracy varies based on data quality and conditions.  
(Reference: Dr. Sat Kumar's Google Scholar profile:  
<https://scholar.google.com/citations?user=L7RCILcAAAAJ&hl=en&oi=ao>)
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**Question 58: Why are soil health reports provided only every 6 months, and can they be provided weekly or fortnightly?**

**Answer:** Soil health reports are provided every 6 months because most crops take approximately 6 months to mature, aligning with government guidelines (e.g., India's Soil Health Card Scheme recommends testing every 2-3 years, USDA suggests annually or every 3-5 years). Weekly or fortnightly reports are not feasible due to the need for barren land and clear skies for accurate satellite data, which is challenging during the Kharif season due to cloud cover. Reports are typically based on data from the last barren period (up to 6 months old).

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**Question 59: Do you have a Desktop App?**

**Answer:** No, we have a web portal instead of a desktop app.

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**Question 60: Do you have an Agriculture ERP or complete ERP for sugar mill and sugarcane plantation with irrigation automation?**

**Answer:** Please contact 8970700045 or 7019992797 for further information.

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**Question 61: How many days will the satellite test the soil (rotation frequency)?**

**Answer:** Soil data frequency depends on the satellite's revisit time: Sentinel-2 (~5 days), Landsat 8 (~16 days), MODIS (daily, lower resolution). Soil moisture data is updated every 12 days using microwave sensors unaffected by cloud cover.

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**Question 62: How many years has this remote sensing technology existed?**

**Answer:** Remote sensing technology has existed since the 1960s, with the Landsat program starting in 1972. Microwave-based soil moisture sensing began in the late 1970s to early 1980s, with significant advancements like NASA's SMAP satellite in 2015.

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**Question 63: What is the experience in generating these reports?**

**Answer:** Reports are generated with 85-90% accuracy, tested across India, using 20,000+ soil samples (60% for validation, 40% for training). Accuracy may vary due to farming practices and climatic conditions.

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**Question 64: How accurate are these reports?**

**Answer:** Reports have 85-90% accuracy, though this may vary depending on factors like farming practices and climatic conditions.

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**Question 65: How deep is the soil testing done via remote sensing?**

**Answer:** Remote sensing estimates soil properties in the topsoil layer, up to approximately 5 cm (2 inches) deep, using surface reflectance data.

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**Question 66: How does satellite-based soil analysis work?**

**Answer:** Satellites capture surface reflectance data across visible, near-infrared, and thermal infrared wavelengths. Spectral signatures estimate soil moisture, organic content, and minerals. Microwave sensors (e.g., Sentinel-1, SMAP) measure soil moisture via dielectric properties, while algorithms and machine learning models process data to generate soil maps for irrigation, health, and crop management.

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**Question 67: What techniques are used to generate soil analysis reports?**

**Answer:** Techniques include:

1. **Spectral Analysis:** Multispectral/hyperspectral imaging and vegetation indices (e.g., NDVI).
  2. **Thermal Infrared Sensing:** Measures soil temperature for moisture estimation.
  3. **Microwave/Radar Sensing:** SAR and passive microwave (e.g., SMAP) for soil moisture.
  4. **Digital Soil Mapping:** Machine learning and data fusion for predictive soil maps.
  5. **Ground-Truth Calibration:** Validates satellite data with ground samples.
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**Question 68: How are soil moisture reports generated?**

**Answer:** Soil moisture reports are generated using microwave wavelength satellite data (e.g., SAR), measuring surface-level moisture (a few cm deep) every 12 days, unaffected by cloud cover. Accuracy is ~80%, tested in India, Australia, New Zealand, France, and England. (Reference: Dr. Sat Kumar's Google Scholar profile: <https://scholar.google.com/citations?user=L7RCILcAAAAJ&hl=en&oi=ao>)

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**Question 69: How are frequency days calculated?**

**Answer:** Frequency days are based on the satellite's revisit time: Sentinel-2 (~5 days), Landsat 8 (~16 days), MODIS (daily). Radar sensors (e.g., Sentinel-1) ensure consistent data collection despite cloud cover.

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**Question 70: Why can't the days to generate soil moisture reports be reduced?**

**Answer:** The frequency of soil moisture reports is limited by the satellite's 12-day revisit cycle and data processing time, making it impossible to reduce the interval while maintaining accuracy.

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**Question 71: How are crop health reports generated?**

**Answer:** Crop health reports are generated using:

1. **Vegetation Indices:** NDVI and others measure plant greenness.
  2. **Thermal Imaging:** Detects crop temperature for water stress.
  3. **Moisture/Environmental Data:** Integrates soil moisture and weather data.
  4. **Machine Learning:** Analyzes data for growth patterns and stress, enabling timely interventions.
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**Question 72: When can micronutrient reports be produced by remote sensing?**

**Answer:** Satellites like Sentinel-2 and Prisma monitor crop health via vegetation indices, but direct micronutrient (e.g., iron, vitamin A, B12) measurement is not yet feasible. Research shows potential using satellite data and machine learning to predict deficiencies, with future advancements expected to improve accuracy and timeliness.

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**Question 73: What framework is used to develop the soil/crop health model?**

**Answer:** The framework includes:

1. **Data Acquisition:** Satellite imagery (NDVI, thermal) and ground truth data.
  2. **Data Preprocessing:** Corrects for atmospheric interference and aligns spatial data.
  3. **Feature Extraction:** Identifies vegetation indices, soil moisture, and thermal data.
  4. **Model Development:** Uses statistical and machine learning models (e.g., regression, neural networks) and geostatistical methods (e.g., kriging).
  5. **Calibration/Validation:** Uses ground truth for accuracy.
  6. **Reporting/Visualization:** Generates maps and actionable insights.
  7. **Feedback Loop:** Incorporates user feedback for continuous improvement.
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**Question 74: How does Satyukt differ from other companies providing similar services?**

**Answer:** Please contact 8970700045 or 7019992797 for further information.

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**Question 75: Can satellite technology provide soil test reports for greenhouses and high-tech polyhouses?**

**Answer:** Satellite-based soil analysis is challenging for greenhouses and polyhouses due to covered structures blocking satellite visibility. A minimum area of 30 m x 30 m is required for reliable data, making it generally not feasible.

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**Question 76: Can data be provided for coffee plantations grown under shade?**

**Answer:** Most services are available for coffee plantations, but satellite-based services (e.g., soil moisture, soil health) are not feasible if the canopy is not visible from above due to shade.

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**Question 77: Can you provide a soil test report comparing laboratory and satellite data?**

**Answer:** Please contact 8970700045 or 7019992797 for further information.

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**Question 78: How are mm values in irrigation advisory useful for farmers?**

**Answer:** The mm values in irrigation advisories indicate the amount of irrigation water required (in millimeters) based on crop type, stage, and soil moisture, helping farmers optimize water usage for crop growth.

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**Question 79: What are the terminologies NDVI, NDRE, NDMI, and are they obtained from satellites as a decision support mechanism?**

**Answer:**

- **NDVI (Normalized Difference Vegetation Index):** Measures crop health via leaf greenness using satellite data (visible and near-infrared bands).
  - **NDRE (Normalized Difference Red Edge):** Assesses plant health, particularly chlorophyll content, using red-edge bands.
  - **NDMI (Normalized Difference Moisture Index):** Estimates vegetation water content using near-infrared and shortwave infrared bands.
- These indices are derived from satellite data and serve as decision support mechanisms for monitoring crop health, water stress, and guiding irrigation and pest management.
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**Question 80: Can a holistic report be provided for all Sat2Farm data instead of just soil health?**

**Answer:** Please contact 8970700045 or 7019992797 for further information.

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**Question 81: Will Razorpay accept international credit cards?**

**Answer:** Razorpay payments are country-specific. Please confirm directly with Razorpay for accurate details.

## **About Satyukt Analytics**

Satyukt Analytics, a deep-tech agri-tech company founded in July 2018 and headquartered in Bengaluru, India, is at the forefront of decision analytics—leveraging cutting-edge satellite remote sensing, machine learning, and big data analytics to tackle critical challenges across agriculture, banking, financial services, and insurance sectors globally. The company was established by Dr. Sat Kumar Tomer, CEO and Founder, along with Dr. Yukti Gill, Managing Director, with a shared vision to revolutionize agriculture using satellite technology, scientific research, and scalable digital tools tailored for global impact. Satyukt leverages advanced technologies like satellite remote sensing, artificial intelligence, machine learning, and cloud computing to deliver real-time, affordable, and scientifically-backed agricultural insights. Its mission is to democratize satellite-based precision farming by providing scalable Software-as-a-Service (SaaS) solutions to farmers, agribusinesses, insurers, financial institutions, and government bodies. Today, Satyukt operates in over 50 countries, with its solutions deployed on more than 500,000 acres across 130+ crop types, helping transform agriculture into a smarter, more sustainable, and efficient practice.

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## **Products and Services**

Satyukt offers a suite of advanced, satellite-powered digital platforms tailored to different stakeholders in the agriculture ecosystem. These include:

### **Sat2Farm – Satellite-Based Advisory for Farmers**

Sat2Farm is a farmer-first digital platform that brings real-time agricultural insights to mobile phones and desktops. Using high-resolution satellite data and AI models, Sat2Farm monitors crop health and detects stress caused by pests, diseases, weeds, and water deficiencies—often before they are visible to the naked eye. It also provides soil nutrient status, including levels of Nitrogen (N), Phosphorus (P), Potassium (K), pH, and Soil Organic Carbon (SOC), along with irrigation recommendations based on soil moisture and weather conditions. The platform offers vegetation indices like NDVI, image-based crop diagnostics, and personalized alerts to guide farmers in making timely, cost-effective decisions. Sat2Farm empowers farmers to optimize input use, prevent yield losses, and enhance farm productivity with minimal effort and maximum precision. Importantly, the app is available in more than 20 regional languages, making it highly accessible and inclusive for farmers across different geographies and literacy levels.

### **Sat4Agri – Advanced Satellite Monitoring for Agribusinesses and Institutions**

Sat4Agri is designed for agribusinesses, NGOs, development agencies, and government bodies working with large-scale agricultural operations. The platform allows remote monitoring of hundreds or thousands of farms simultaneously using satellite imagery and machine learning algorithms. Sat4Agri provides data on vegetation health (NDVI, NDRE, SAVI), crop stages, rainfall patterns, irrigation needs, and nutrient deficiencies. It supports organizations in delivering timely advisories, evaluating the impact of interventions, and improving input distribution. With bulk data handling, centralized dashboards, and

customizable analytics, Sat4Agri enables smart decision-making and enhanced operational efficiency across regions. It is especially effective for contract farming, public welfare programs, and corporate sustainability tracking.

### **Sat4Risk – Farm Risk Assessment and Crop Insurance Intelligence**

Sat4Risk is built to assess, monitor, and manage agricultural risks for insurance providers, reinsurers, and disaster management agencies. It uses multi-source satellite data to identify and alert users to risks such as drought, flood, crop failure, and pest outbreaks. Sat4Risk offers pre-season risk profiling, in-season alerts, and postseason assessment tools that help insurers validate claims and reduce fraud. Government agencies use Sat4Risk for early warning systems, food security planning, and disaster response. With historical and real-time satellite imagery, Sat4Risk enhances transparency and accelerates claim settlements. It supports both indemnity-based and parametric insurance models, making it a vital tool for strengthening agricultural resilience and financial protection.

### **MRV (Measurement, Reporting & Verification) – Carbon and Soil Health Monitoring**

Satyukt's MRV platform is tailored for sustainability-driven organizations, carbon farming programs, and climate-smart agriculture initiatives. The service enables accurate measurement, reporting, and verification of Soil Organic Carbon (SOC) using satellite data and AI-driven models. MRV helps quantify carbon sequestration and soil health improvements due to regenerative practices like cover cropping, reduced tillage, and organic farming. The platform supports organizations in generating certified carbon credits, achieving ESG goals, and validating environmental impacts. By reducing the dependency on manual sampling and lab testing, Satyukt's MRV offers a scalable, science-backed alternative for carbon monitoring and reporting across diverse geographies.

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### **Global Reach and Sector Coverage**

Satyukt Analytics currently operates in over 50 countries, serving a wide array of stakeholders across agriculture, insurance, finance, climate, and policy sectors. From smallholder farmers in rural areas to global agribusinesses and government programs, Satyukt's platforms scale effortlessly across regions and user types. The company supports crop monitoring, credit profiling, insurance automation, sustainability tracking, and climate-risk planning at both micro and macro levels. Multilingual support, mobile accessibility, and customizable solutions make it ideal for local deployment as well as national-scale programs.

Satyukt's services are trusted across a diverse global footprint, including India, Bangladesh, Sri Lanka, Afghanistan, Malaysia, Indonesia, the Philippines, Singapore, Turkey, Iran, Kuwait, Saudi Arabia, the United Arab Emirates, the United States, Colombia, Venezuela, Suriname, Ghana, Nigeria, Kenya, Tanzania, Uganda, Zambia, Namibia, Botswana, South Africa, South Sudan, Egypt, Morocco, Algeria, Tunisia, Togo (Togolese Republic), Benin, Cameroon, Democratic Republic of Congo, Ethiopia, Somalia, Mozambique, Zimbabwe, Malawi, Swaziland, Guyana, Netherlands, Ireland, Albania, Finland, Bulgaria, Ukraine, Bosnia and Herzegovina, Switzerland, Denmark, and Sweden.

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## **Our Team and Scientific Strength**

Led by Founder and CEO Dr. Sat Kumar Tomer and Managing Director Dr. Yukti Gill, the Satyukt team includes experts in agriculture, hydrology, meteorology, remote sensing, and data science. The leadership is backed by a strong scientific advisory group and interdisciplinary professionals who bring research-level accuracy to commercial applications. With years of experience in satellite data processing and field-level agricultural modeling, the team ensures that each solution is not only technically robust but also practically implementable. The company continuously evolves its offerings based on technological advancements, user feedback, and climate trends.

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## **What Makes Satyukt Unique**

Satyukt differentiates itself through a unique blend of science, scalability, and simplicity. Unlike many agri-tech platforms, Satyukt builds and controls its entire data pipeline—from satellite data acquisition and proprietary algorithm development to visualization and delivery. All insights are designed to be affordable, hyperlocal, and easy to understand, making precision farming accessible to even the most remote users. Its wide product range serves the entire agricultural value chain—from individual farmers and insurers to banks and ESG-driven institutions. The company's ability to translate satellite data into decision-making tools in real time is a testament to its innovation and commitment to sustainability.

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## **Partnership and Collaboration**

Satyukt collaborates with stakeholders across the ecosystem, including agritech startups, banks, FPOs, NGOs, insurance firms, climate organizations, and government departments. The company offers APIs, white-labeled dashboards, and enterprise-grade solutions for seamless integration with partner operations. Satyukt is also open to joint research, pilot programs, and sustainability projects aimed at digital transformation in agriculture. If your organization is looking to adopt data-driven, climate-smart solutions, Satyukt is your trusted partner for impact and innovation.

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## Onboarding & App Introduction

**Q:** How does the Sat2Farm app work?

**A:** Sat2Farm uses satellite data and AI to give you farm-specific insights. Add your farm by geo-tagging, select your crop, and receive updates on soil health, irrigation, weather, pest/disease risks, and more.

**Q:** Is there a demo for this app?

**A:** Yes! Watch our demo video here: <https://youtu.be/DgiBr4AdBv0>

Explore the demo farm inside the app to understand features before subscribing.

**Q:** I'm new here. How do I start using the app?

**A:** Welcome! Start by adding your farm using the "Add Farm" feature. Then select your crop and sowing date. You'll begin receiving tailored scientific insights. Need help? Ask anytime!

**Q:** What languages does the app support?

**A:** Currently available in English, Hindi, Kannada, Telugu, and more. Language can be selected from the profile section.

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## Adding a Farm

**Q:** How to add my farm in the app?

**A:** Go to Home → Tap "Add New" → Choose Walk or Draw method → Mark the boundary → Fill in farm name, crop, sowing date → Save. Your farm will be listed under "My Farms".

**Q:** I walked around my farm but it shows 0.0 acres?

**A:** Ensure your GPS/location is on, walk slowly around the full boundary, and avoid standing still for long. Try redrawing if the issue persists.

**Q:** Can I add multiple farms?

**A:** Yes! You can add as many farms as needed. Each will have a unique Farm ID for tracking.

**Q:** Can I delete or edit a farm?

**A:** Yes you can delete a farm and you edit farm details such as Sowing date and crop only. But the farm name and coordinates can't be edited. Contact support with your Farm ID for any specific queries.

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## Crop Health / NDVI

**Q:** How do I check NDVI for crop health?

**A:** Go to "My Farms" → Select your farm → Tap "Crop Health". You'll see the NDVI map with color zones (Red = Poor, Green = Healthy).

**Q:** What does white area in NDVI mean?

**A:** White = No data. Likely due to cloud cover blocking the satellite image.

**Q:** Why is crop health not updating?

**A:** NDVI updates every 5 days. If cloudy, data might be skipped. Check the next update date in the same section.

**Q:** How to understand the NDVI chart?

**A:** NDVI chart shows crop health trends over time. Higher curve = better vegetation. Compare weekly values to track crop progress.

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## Soil Health & Moisture

**Q:** How do I get a soil health report?

**A:** After adding your farm and selecting the crop, tap "Soil Health". You'll see macronutrients (N, P, K), pH, and organic carbon. Report is downloadable as PDF.

**Q:** How is soil health measured by satellite?

**A:** It's estimated using satellite spectral bands + AI models trained on lab data. This gives non-invasive, cost-effective insights.

**Q:** Why is my soil moisture data old?

**A:** Soil moisture updates every 12 days. If recent data is missing, it may be due to satellite schedule or cloud/rain interference.

**Q:** LSWI is low even after irrigation. Why?

**A:** LSWI may take 1-3 days to reflect changes. Factors like soil type or cloudy weather may delay visible updates.

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### **Weather Forecast**

**Q:** How to view the weather forecast?

**A:** In "My Farms", select your farm → Tap "Weather" → View 14-day forecast for temperature, rainfall, wind, and cloud cover graphically.

**Q:** Why is the forecast not updating?

**A:** Refresh the app or check the internet. Forecast updates every 3 hours.

**Q:** Can I get rainfall data in mm?

**A:** Yes. Under the Rainfall tab, mm values are shown per day. Pinch to zoom for details.

**Q:** Does it predict the monsoon accurately?

**A:** It's ~80% accurate for the next 3 days; monsoon can change quickly. Use local knowledge as a supplement.

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### **Irrigation Advisory**

**Q:** How to get irrigation recommendations?

**A:** Tap "Irrigation" → See amount (mm) and frequency for surface, sprinkler, and drip based on your crop stage and soil moisture.

**Q:** Why is the irrigation section not working?

**A:** Data may be processed. Wait up to 4 hours after adding farm or contact support if persists.

**Q:** What do mm values mean?

**A:** Millimeters of water per acre needed to reach optimal moisture.

**Q:** Can I follow the schedule for drip irrigation?

**A:** Yes. In irrigation advisory, follow the "Drip" method for specific guidance.

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### **Crop Calendar**

**Q:** What is the Crop Calendar?

**A:** A weekly timeline of farm activities from field prep to harvest, tailored to your sowing date.

**Q:** How to access it?

**A:** Tap "Crop Calendar" in your farm menu. Scroll weeks to see tasks and input recommendations.

**Q:** Does it cover pest control?

**A:** Yes, in specific cases it flags spraying windows for pesticides and organic options. Otherwise, covered in pest and disease forewarning.

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### **Pest & Disease Forewarning**

**Q:** How do I get pest and disease alerts?

**A:** Open "Pest & Disease Forewarning" → View upcoming risk dates, symptom details, and control measures.

**Q:** What factors trigger alerts?

**A:** Weather parameters: temperature, humidity, rainfall.

**Q:** How accurate are these warnings?

**A:** ~85% based on historical data and weather.



**Q:** Can I request specific disease info?

**A:** Yes. Use "Community" or "Image Advisory" to ask experts.

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### **Image Advisory**

**Q:** How to upload crop photos?

**A:** Tap "Image Advisory" → Camera icon → Take or select more than 3 clear images → Add comments → Submit.

**Q:** How long for diagnosis?

**A:** 3-4 hours (working hours).

**Q:** No reply after 2 days. What now?

**A:** Re-upload images with timestamp or contact support with Farm ID.

**Q:** Can I get organic solutions?

**A:** Yes, we also provide organic solutions based on requirements. Contact support for more information.

---

### **Trial & Pricing**

**Q:** Can I get a trial?

**A:** We offer a demo farm, but no free trial. Subscribe at ₹800/acre/season for full access.

**Q:** Any offer for new farmers?

**A:** Contact sales at [contact@satyukt.com](mailto:contact@satyukt.com).

**Q:** Why no freemium?

**A:** Premium services support real-time updates and expert advisory.

**Q:** Can I pay per region currency?

**A:** Currently INR only via Razorpay. Local currency support is in development.

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### **Payment & Unlock**

**Q:** Payment done but farm not unlocked?

**A:** Sync delay up to 2 hours. If still locked, share Farm ID to [support@satyukt.com](mailto:support@satyukt.com).

**Q:** How to pay?

**A:** In-app via Razorpay. Go to Farm → Lock icon → Pay.

**Q:** Is each farm charged separately?

**A:** Yes. ₹800 per acre per season per farm.

**Q:** Can I update the referral code?

**A:** Only once after signup. Contact support if you missed it.

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### **Troubleshooting**

**Q:** App crashing or blank screens?

**A:** Clear cache or reinstall. Ensure the latest version from Play Store.

**Q:** Data not loading?

**A:** Check the internet. Switch between Wi-Fi & mobile data.

**Q:** Farm deleted automatically?

**A:** Rare issue. Contact support with Farm ID & timestamp.

**Q:** Multiple farms with the same name error?

**A:** Rare issue. Contact support to merge them into a single record..

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### **Community & Support**

**Q:** How to contact you?

**A:** Call +91-8970095700, email [contact@satyukt.com](mailto:contact@satyukt.com), or use the Community page in-app.

**Q:** How to use a Community page?

**A:** Tap Community → + icon → Enter your question → Submit. Experts reply in 24 hrs.

**Q:** Can I share farms with others?

**A:** Yes. In My Farms → ••• menu → Share → Enter mobile number.

**Q:** Do you call for clarifications?

**A:** Yes, experts may call if more details are needed.

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### **Language Support**

**Q:** Can I switch app language?

**A:** Tap menu → Switch Language → Choose from available options.

**Q:** Are advisories translated?

**A:** Advisories are in English & major languages based on crop support.

**Q:** Need Hindi replies?

**A:** Use a Community page in Hindi; our team responds in kind.

**Q:** How to add a new language?

**A:** Contact support to request for your language.

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### **Data Accuracy**

**Q:** What is the accuracy of soil moisture?

**A:** ~80%.

**Q:** How accurate is the weather forecast?

**A:** ~90% for next 3 days; drops in monsoon.

**Q:** Soil health accuracy?

**A:** ~85-90%, varies by region & crop.

**Q:** NDVI accuracy?

**A:** Optical measure; reliable within 5-day window when clear.

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### **Advanced**

**Q:** Can I analyze terrace gardens?

**A:** Soil moisture & NDVI need more than 30m × 30m. Smaller gardens not supported.

**Q:** Can I get NPK for a terrace garden?

**A:** No, soil health requires more than ¼ acre.

**Q:** Thick plantations (banana, coconut)?

**A:** Weather & NDVI supported; soil health & moisture less accurate under canopy.

**Q:** Insurance integration?

**A:** We offer an API (Sat4Risk) for insurers to integrate.

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### **Historical Data**

**Q:** Can I access last year's data?

**A:** Yes, request historical export (paid). Not directly in-app.

**Q:** How old is satellite data used?

**A:** Up to 6 months for barren land analysis.

**Q:** Can I backfill KML farms?

**A:** We can import KML for paid customers-contact support.

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### **Carbon & Sustainability**

**Q:** Carbon emissions for rice fields?

**A:** We estimate via our MRV algorithm. Results available on request.

**Q:** How to get carbon credits?

**A:** We estimate emissions; contact support for more information.

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### **Tech**

**Q:** Can I access the admin portal?

**A:** Yes at <https://sat2farm.com/> with your credentials.

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### **User Feedback**

**Q:** How to submit app feedback?

**A:** Menu → Feedback → Submit your suggestions.

**Q:** Can I suggest new features?

**A:** Yes. Use Feedback or email to [contact@satyukt.com](mailto:contact@satyukt.com).

**Q:** Report bugs?

**A:** Capture screenshot and share via support email with Farm ID.

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### **FAQ Quick References**

**Q:** Is this app free?

**A:** No, ₹800/acre/season.

**Q:** Min area needed?

**A:** 30m×30m for satellite features.

**Q:** Trial available?

**A:** Only demo farm.

**Q:** Support contact?

**A:** +91-8970095700 / [contact@satyukt.com](mailto:contact@satyukt.com).

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### **Community Greetings**

**Q:** Hello, I'm new here-any guidance?

**A:** Welcome! Geo-tag your farm and explore features. Ask any question on the Community page!

**Q:** Good morning everyone!

**A:** Good morning! How can we assist you today?

**Q:** I'm happy to be here!

**A:** Great to have you! Let us know your farm location to get started.

**Q:** Is there anyone from [Country]?

**A:** Yes-connect with our community from your region!

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### **Language Queries**

**Q:** “इस app mein kya hai?”

**A:** It's a digital farm advisor-satellite + AI insights on soil, irrigation, pest, weather, NDVI.

**Q:** “soil test karane ke liye kya karna hoga?”

**A:** Add farm → Tap Soil Health → Pay → Get PDF report with NPK, pH, SOC.

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### **Regional Support**

**Q:** Does it work in Nigeria/Ghana/Kenya?

**A:** Yes! Works globally. Crop lists tailored per region.

**Q:** Can I pay in UGX/GHS?

**A:** INR only now. We plan multi-currency soon.

**Q:** Local map inaccuracies?

**A:** Uses Google Earth base map; cannot edit landmarks.

**Q:** Local crop calendars?

**A:** Based on global agronomy; adjust with local practices.

---

### **Data Export & Reports**

**Q:** Can I download reports?

**A:** Yes-tap the download icon on Soil Health, Weather, Calendar pages.

**Q:** Export historical data?

**A:** Request via support (paid).

**Q:** Share report externally?

**A:** Download PDF and share via email or WhatsApp.

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### **Specialized Crops**

**Q:** Coffee & Tea support?

**A:** Weather, Calendar, Pest advisories work. NDVI under shade is less accurate.

**Q:** Horticulture crops (onion, papaya)?

**A:** Supported. Use the same workflows → Soil Health, NDVI, Calendar.

**Q:** Greenhouse / polyhouse?

**A:** Satellite features limited-can analyze open areas; others under development.

**Q:** Terrace garden?

**A:** Minimum area rule applies; small patches not supported.

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### **Additional Services**

**Q:** Carbon credit estimation?

**A:** Available via MRV. Contact [sustainability@satyukt.com](mailto:sustainability@satyukt.com).

**Q:** Integration with insurance?

**A:** Our Sat4Risk API feeds insurers with risk reports.

**Q:** Land undulation maps?

**A:** DEM at 30m resolution available (paid).

**Q:** Market trend data?

**A:** Not provided. Focus is on agronomy & decision support.

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### **Tech Support & Integration**

**Q:** Admin portal access?

**A:** Available to enterprise clients-email your request.

**Q:** Web portal trial?

**A:** Demo available-schedule via <https://satyukt.com/index.html>.

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### **Conclusion & Next Steps**

**Q:** Where to get help?

**A:** Contact +91-8970095700, email [contact@satyukt.com](mailto:contact@satyukt.com), or use in-app Community.

**Q:** Want more features?

**A:** Submit ideas via Feedback in the menu.

**Q:** How to stay updated?

**A:** Follow us on Facebook & LinkedIn.

**Q:** Thank you!

**A:** We appreciate your trust. Happy farming!

### **Contact Us**

You can get in touch with the Satyukt team via the following channels:

- Address: 2nd Floor, 1A Block, Sanjay Nagar Main Rd, CIL Layout Block, Judicial Colony, Raj Mahal Vilas 2nd Stage, Sanjayanagara, Bengaluru, Karnataka 560094

- Email: [contact@satyukt.com](mailto:contact@satyukt.com)
- Phone/WhatsApp: +91-8970700045 | +91-7019992797
- Website: [www.satyukt.com](http://www.satyukt.com)